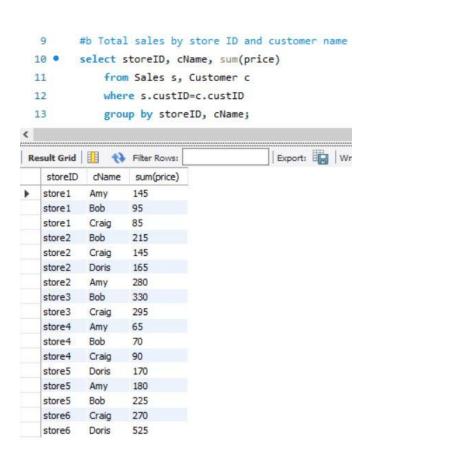
Lab 11

2.) A:

```
1
   2
          #a All inexpensive Tshirts sold in California to young people
          select S.city, I.color, C.cName, F.price
   3 •
              from Sales F, Store S, Item I, Customer C
   4
              where F.storeID = S.storeID and F.itemID = I.itemID
   5
              and F.custID = C.custID and S.state = 'CA'
              and I.category = 'Tshirt' and C.age < 22 and F.price < 25;
<
                                             Export: Wrap Cell Content: IA
 Result Grid
               Filter Rows:
    city
             color
                   cName
                           price
                           10
   Palo Alto
            blue
                   Amy
   Palo Alto
            blue
                   Bob
                          15
   Belmont
                           20
             red
                   Bob
                           15
   Belmont
                   Bob
   Belmont
            red
                   Bob
```

B:



```
#c Drill-down Total sales by store ID, category, and customer
15
16 •
        select storeID, i.category, cName, sum(price)
17
             from Sales s, Customer c, Item i
18
             where s.custID=c.custID and s.itemID=i.itemID
 19
             group by storeID, i.category, cName;
Export: Wrap Cell Content: IA
   storeID category cName sum(price)
          Tshirt
                           115
 store1
                    Amy
  store1
          Tshirt
                   Bob
                           15
  store1
          Tshirt
                    Craig
                           45
  store1
          Jacket
                   Amy
                           30
          Jacket
                    Bob
                           80
  store1
          Jacket
                   Craig
                          40
  store 1
  store2
          Tshirt
                    Bob
                           125
  store2
          Jacket
                   Craig
                          145
  store2
          Jacket
                   Doris
                           165
                           280
  store2
          Jacket
                   Amy
          Jacket
  store2
                   Bob
                           90
                           165
  store3
          Jacket
                   Bob
  store3
          Jacket
                    Craig
                           145
  store3
          Tshirt
                   Craig
                          150
          Tshirt
                           165
  store3
  store4
          Tshirt
                   Amy
                           65
          Tshirt
                   Bob
  store4
                           70
  store4
          Jacket
                   Craig 90
  store5
          Jacket
                   Doris
                           170
  store5
          Jacket
                    Amy
                           180
  store5
          Jacket
                           270
  store6
          Jacket
                   Craig
          Jacket
                           360
  store6
                   Doris
  store6
        Tshirt
                   Doris
                          165
```

D:

```
#d "Slice" Total sales by store ID, category, and customer for "store6" only
21
        select s.storeID, i.category, cName, sum(price)
22 •
23
            from Sales s, Customer c, Item i, Store t
            where s.custID=c.custID and s.itemID=i.itemID
24
25
            and s.storeID=t.storeID and t.storeId ='store6'
26
            group by storeID, i.category, cName;
                                        Export: Wrap Cell Content: IA
cName
                         sum(price)
  storeID
          category
                         270
  store6
          Jacket
                  Craig
         Jacket
  store6
                  Doris
                         360
  store6
         Tshirt
                  Doris
                         165
```

E:

```
#e "Dice" Total sales by store ID, category, and customer for "store6" and "Jacket" only
        select s.storeID, i.category, cName, sum(price)
 29 •
           from Sales s, Customer c, Item i, Store t
 31
           where s.custID=c.custID and s.itemID=i.itemID
 32
            and s.storeID=t.storeID and t.storeId ='store6' and i.category='Jacket'
 33
           group by storeID, i.category, cName;
Export: Wrap Cell Content: IA
  storeID category cName sum(price)
 store6
         Jacket
                  Craig
 store6 Jacket Doris 360
```

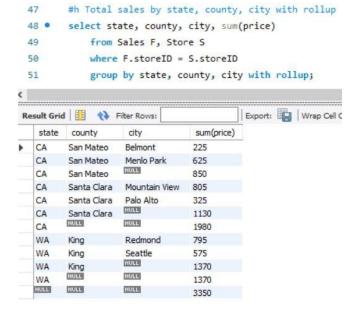
```
F:
```

```
#f Roll-up Total sales by category
 35
 36 •
        select i.category, sum(price)
            from Sales s, Customer c, Item i, Store t
 37
            where s.custID=c.custID and s.itemID=i.itemID and s.storeID=t.storeID
 38
 39
            group by i.category;
Export: Wrap Cell Content: TA
           sum(price)
   category
  Tshirt
          915
  Jacket
          2435
```

G:

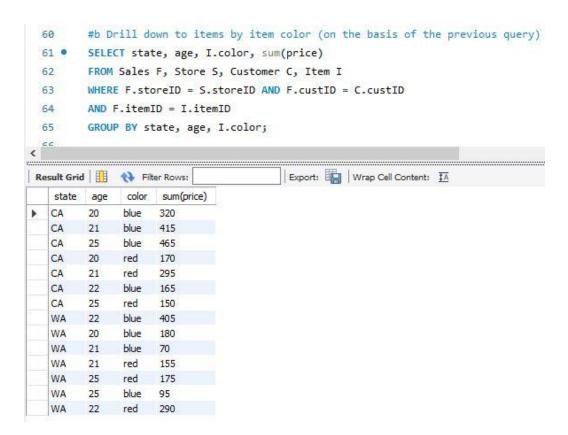


H:



```
#a List total sales by state of store and age of customer
 55
        SELECT state, age, sum(price) FROM Sales F, Store S, Customer C
 56 •
 57
        WHERE F.storeID = S.storeID AND F.custID = C.custID
 58
        GROUP BY state, age;
                                           Export: Wrap Cell Content: IA
Result Grid
              Filter Rows:
               sum(price)
   state
         age
  CA
         20
               490
  CA
         21
              710
  CA
         25
               615
  CA
         22
               165
  WA
         22
               695
               180
  WA
         20
  WA
         21
               225
  WA
         25
               270
```

B:



```
67
         #c Use "with rollup" with the previous query
         # (for the rollup rows the output must match the result of query a)
 68
 69 •
         SELECT state, age, I.color, sum(price)
70
         FROM Sales F, Store S, Customer C, Item I
71
         WHERE F.storeID = S.storeID AND F.custID = C.custID
         AND F.itemID = I.itemID
72
73
         GROUP BY state, age, I.color WITH ROLLUP;
Result Grid
                                             Export: Wrap Cell Content: 1A
               Filter Rows:
                      sum(price)
         age
                color
         20
  CA
               blue
                      320
  CA
         20
               red
                      170
               NULL
  CA
         20
                      490
  CA
         21
               blue
                      415
  CA
         21
               red
                      295
               NULL
  CA
         21
                      710
  CA
         22
               blue
                      165
               NULL
  CA
         22
                      165
  CA
         25
               blue
                      465
  CA
         25
               red
                      150
               NULL
         25
                      615
  CA
               NULL
         NULL
  CA
                      1980
  WA
         20
               blue
                      180
               NULL
  WA
         20
                      180
  WA
         21
               blue
                      70
                      155
  WA
         21
               red
               HULL
                      225
  WA
         21
         22
               blue
                      405
  WA
  WA
         22
               red
                      290
               NULL
  WA
         22
                      695
  WA
         25
               blue
                      95
         25
                      175
  WA
               red
               NULL
         25
                      270
  WA
               NULL
         NULL
                      1370
  WA
  NULL
         NULL
               MULL
                      3350
```

```
D:
```

```
73
         #d Slice by listing only items with blue color (on the basis of query b)
 74 •
         SELECT state, age, I.color, sum(price)
 75
         FROM Sales F, Store S, Customer C, Item I
         WHERE F.storeID = S.storeID AND F.custID = C.custID
 76
         AND F.itemID = I.itemID AND I.color = 'blue'
 77
 78
         GROUP BY state, age, I.color;
                                           Export: Wrap Cell Content: TA
Result Grid
              Filter Rows:
   state
               color
                     sum(price)
         age
  CA
         20
               blue
                     320
  CA
         21
               blue
                     415
         25
               blue
                     465
  CA
  CA
         22
               blue
                     165
  WA
               blue
                     405
  WA
         20
               blue
                     180
  WA
         21
               blue
                     70
  WA
               blue
                     95
```

E:

